NNeTS SOP

Title: Triage of transport referrals and prioritisation of simultaneous referrals

Triage of referrals to NNeTS for transport

The default ethos of the Northern Neonatal Transport Service (NNeTS) in considering transport referrals is:

'Accept the referral unless there is an exceptional reason not to transport the baby.'

The exclusion criteria are few (listed below). If a referral is made and there is concern after taking the case details that one of the exclusion criteria have been met, then the case should be discussed with the NNeTS Consultant on-call (by conference call preferably). At that point, if required, an onward call to a suitable alternative transport provider will be made to discuss the case. *Following* this, contact will be made with the referring centre (single point of contact principle, if not already in conference call). **All** calls to NNETS should be documented in the transport book *including* those where the outcome is to ask another provider to move the baby.

Exclusion criteria (which preclude NNeTS transport):

- > 6kg
- > 6m old (corrected age)
- 'Non-neonatal'-scope of illness or reason for transfer (e.g. fulminant meningococcal sepsis or polytrauma)
- [ECMO transfer from outside the region]

All other referrals should be considered and moved by a NNeTS team.

The first two criteria related to physically being able to fit the baby in the equipment. The second is about the clinical field of expertise being deployed to the baby (i.e. a paediatric intensivist will be more skilled at looking after a polytrauma victim than a neonatal team member).

ECMO referrals from out of the region mandate a referral discussion that *always* requires NNeTS consultant input, *may* require a specialist mobile ECMO team to retrieve them **BUT** where NNeTS (bringing back to Freeman) *might* be the best compromise in terms of speed of response and uplift in what is likely to be a time-critical, unstable transport episode. This is, therefore, only a relative exclusion criterion for NNeTS retrieval.

By definition, NNeTS will almost exclusively be the service most appropriate to move babies who are being transferred into or out of a NICU or SCBU (regardless of destination if moving out). However, this does NOT preclude NNeTS moving babies from paediatric wards to paediatric wards where the illness type/presentation is one which is seen in neonatal practice and the baby meets the physical transport criteria outlined above. For example: an appropriate referral that NNeTS would complete might be an ex-24 weeker, discharged home, presenting at a week post-term (corrected GA) with signs of bowel obstruction requiring transport from a paediatric admission unit at a district general hospital to a surgical ward or PICU for assessment and treatment.

There may be RARE occasions when both the NNeTS teams are already tasked and another referral comes in. In these circumstances there needs to be consideration of the NNeTS work ongoing, the category of referral received (see below) and resources available (e.g. is there a second medic available to convert the non-acute team to acute deployment). Specifically, the target uplift times and current status of the teams on the road are important as *for most situations*, the time targets for deployment can be met by sensible re-tasking due to the roads distances between units covered by NNeTS, even if a

repatriation is postponed for a matter of hours to do so. The NNeTS Consultant on call must be involved in these discussions.

It is often the case that with suitable advice and support by telephone, many situations will be *non-time critical* (see below) and can be queued appropriately for transport later in the shift. In those situations which are clearly time-critical and NNeTS cannot respond in a timely fashion (by retasking or queuing the job), the NNeTS consultant should discuss the situation with the team at NECTaR (in the first instance) to see if resources can be retasked across the two services to meet demand in a timely fashion.

Specific response times and requirements

The NHS England Neonatal Transport Service Specifications (E08) requires that neonatal transport teams be dispatched from base unit in response to a time-critical referral within 1 hour of the referral telephone call. For *any* uplift or intensive care referral, the transport team should arrive at the patient's cotside within 3.5 hours of the referral call. The clock starts when the referral telephone call begins, or the point during the telephone call when it becomes clear (and is agreed) that a referral for uplift is required (for example where the initial call is for advice). For other transports the BAPM dataset categorises transports based on a decision made as to whether the transport should be completed on the same day (i.e. within 24 hours), or can wait longer than 24 hours.

As NNeTS use NEAS ambulances, appropriate prioritisation needs considered for the call made to NEAS to request an ambulance:

- For *time-critical* transports, an emergency ambulance (8-minute response) must be requested in order to fulfil the 1 hour dispatch time as per NNeTS service specification
- For *non-time critical intensive care transport/uplifts* a request for an emergency ambulance (8-minute response) is required to ensure the team arrives by the patient cotside at any of the regional NICUs/SCBUs within the 3.5 hours to 'arrival by the patient' time, *if* departing from base.
- *For 'same day' transport*, it will most likely be appropriate to seek an urgent ambulance (to arrive within 1 hour; e.g. if moving a repatriation for non-ITU care was vital to free-up capacity in a NICU): if there is significant delay in the ambulance arriving there should be a discussion with the NNeTS Consultant on call and the request upgraded to an emergency response to fulfil the transport.
- *For transfers which can wait >24 hours* (e.g. simple repatriations or planned transfer for surgery), wherever possible, the ambulance should be booked ahead of time or booked on whichever priority is recommended after a discussion with the NEAS control room: NEAS may request that NNeTS ring on the day of transport and ask for a higher than routine priority ambulance. If a same-day vehicle is required it should be booked as either emergency or urgent (as appropriate). As with the other categories above, significant delay should prompt discussion with the NNeTS Consultant regarding upgrade of the request in order to ensure the delay does not compromise the safety and effectiveness of the service

If delay in providing a vehicle compromises an appropriate response to a referral, the NNeTS consultant on call should consider dispatching the clinical team with hand-held equipment bags ahead of the ambulance by other means, in parallel with upgrading the response time to ensure the transport trolley reaches the patient in an appropriate time frame to facilitate the transfer.

Transport Category Prioritisation List

User note: These categories are intended to aid decision making locally by the NNeTS team when prioritising the dispatch of teams to referring units. Beyond 'Category A (time critical)', the response time required (national standard) does not directly map to a category as individual variation in cases will result in different response times required, though generally speaking the lower the category as outlined below, the less likely a short response time will be required.

The **categories** are hierarchical (i.e. A is higher priority than B etc) but there is no hierarchy *within* categories. To prioritise two or more concurrent referrals within any given category, the prioritisation decision rests with the NNeTS consultant on call and will depend on multiple factors such as the ongoing NNeTS team activity, the location of the referring unit (level of care provided, distance from definitive care) and the relative stability of the patients (including deteriorating course or not etc.).

Category A: (Time critical)†: NNeTS consultant on call should be notified in <u>all</u> cases

- Potential ECMO candidate
- Intestinal perforation
- Neonate or child requiring emergency (life, limb or gut saving) surgery or invasive procedure*
- Life-threatening respiratory or cardiovascular failure not responding to appropriate local management:

  Despite giving appropriate ventilation via endotracheal tube the infant's respiratory status remains unstable or severely compromised by:
  - *persistent unstable pneumothorax despite chest drain*
  - *requiring FiO_2 100%*
  - *arterial oxygen < 5kPa on 2 consecutive blood gas measurements*
  - *pH <7.1 and pCO_2 >9kPa*
  - *persistent mean blood pressure below corrected gestational age, measured on arterial line; if measured with cuff only, there should also be acidosis (pH <7.1)*
- Pulmonary hypertension of the newborn (PPHN) requiring nitric oxide
- Ventilated tracheo-oesophageal fistula/atresia
- Suspected duct-dependent cardiac anomaly **not** responding to alprostadil (prostin)
- Hypoxic ischaemic encephalopathy requiring therapeutic hypothermia ('cooling')
- Gastroschisis or malformation with externalisation of abdominal viscera
- Suspected malrotation/volvulus†*
- Hyperammonaemia/suspected metabolic condition requiring ITU care

†When prioritising more than one category A referral, consideration should be given to the clinical stability of the baby: unstable babies may need moving as highest priority if intervention (e.g. surgery) is the only thing that has a chance to alter outcome, rather than waiting for the local team to stabilise the baby whilst moving a 'stable' category A baby instead.

*In extreme cases in exceptional circumstances, consider one-way transfer by referring hospital team

†*well babies with bilious vomiting alone do NOT require time critical transfer: this only applies to babies where there is a clinical cause to suspect volvulus or malrotation

Category B

- Intubated ventilated neonate any gestation in a SCBU
- Intubated ventilated neonate less than 27 weeks gestation in a LNU

Category C

- Neonate on CPAP in a SCBU
- Emergency transfer between NICUs for specialist care, resource or capacity reasons
- Repatriation to free up capacity in NICU (including babies receiving HDU care)
- Transfer to home or hospice for step down or end of life care
- Neonate requiring **urgent** planned surgery, invasive procedure or **urgent** planned investigation‡ (e.g. PDA ligation, uplift of baby with duct dependent lesion stable on prostin)

‡where the investigation is likely to be important and required to inform diagnosis or progress treatment

Category D

- Transfer of child for specialist ward level care
- Repatriation of a well-baby a SCBU for ongoing care for non-capacity reasons
- Transfer of neonate for outpatient appointment, planned non-urgent intervention, surgery or non-urgent investigation¥

¥where the investigation is desirable but not likely to provide new information/diagnosis and there is a broad time window (days-weeks) within which the investigation could be done AND there is no other safe way to ensure the appointment/investigation can be fulfilled by the referring team